

PMC-EF2a

(20402)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**

**RECIPIENT:**University of Utah**STATE:** UT

PROJECT TITLE : Enhanced Geothermal Systems – Concept Testing and Development at the Raft River Geothermal Field, Idaho (non-ARRA)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-PS36-08GO98008	DE-EE0000215	GFO-10-282	GO215

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:**Description:**

- A9** Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.
- C12** Siting, construction, and operation of energy system prototypes including, but not limited to, wind resource, hydropower, geothermal, fossil fuel, biomass, and solar energy pilot projects.

Rational for determination:

University of Utah (U of U) proposes to use DOE and cost share funding to develop and demonstrate the techniques required to form and sustain EGS reservoirs at U.S. Geothermal's Raft River geothermal field in Cassia County, Idaho, and employ a staged stimulation program. This project was previously approved by GFO-09-122 on August 5, 2009 with a CX A9, B3.1, B3.6 and B5.12. However, an additional task (1.3.1 Well Readiness) was added, therefore another NEPA review was needed. This review is specific to Phase I (Task 1.3.1), Phase II and Phase III. The following task and Phases are not Categorical Excludable but require an EA (C12) since impacts due to well stimulation have not been identified therefore Phases II and III cannot be analyzed at this time. Phase I (Task 1.3.1) is a "connected action" (40 CFR 1508.25(a)(1)(iii)) to subsequent Phases of the project.

Phase I (Task 1.3.1) Well Readiness – Currently, Well RRG-9 is being readied for stimulation work in the Precambrian reservoir rocks. The well was originally cased to approximately 2315 ft MD KB. Because it was originally left uncased into the Precambrian reservoir (TD of 6089 ft MD KB) it was possible to conduct detailed logging, wellbore evaluations, and isolation controlled injection prior to casing. Following approval to continue, casing would be installed. Integrity surveys would be performed, and remedial cementing carried out if needed. The perforation program would be designed and completed. A 1.16 mile 12-inch line would be installed from the plant to the existing well location adjacent to an existing pipeline near an agricultural field. The proposed pipeline would cross the Raft River over an existing bridge that spans existing pipelines authorized by the US Army Corps of Engineers. The supply line would bring the cooled water required for the thermal stimulation.

Phase II – Well Stimulation

Phase III – Long Term Monitoring

This proposed project has the potential to impact surface and subsurface resources and therefore an Environmental Assessment (EA) is required (C12) for all tasks/subtasks beyond subtask 1.2.1 (except 1.4.1 – Reporting, which is covered by CX A9). DOE must analyze the impacts associated with the installation of the supply pipeline and well stimulation program according to the National Environmental Policy Act (NEPA). Existing and potential impacts are unknown at this time. Since this project includes Enhanced Geothermal Systems (EGS) activities, an induced seismicity study must also be completed for incorporation into the NEPA analysis. It is for these reasons that DOE (per the DOE NEPA implementing regulations found in Appendix C to Subpart D to 10 CFR Part 1021 - C12) will require the project's proposers to prepare an EA before further project implementation can occur and prior to allowing federal funds for tasks and Phases beyond what has already been approved by the previous NEPA determination for this proposed project. Therefore Categorical Exclusion A9 "Information Gathering" and EA Determination C12 apply, "Siting, construction, and operation of energy system prototypes including, but not limited to, wind resource, hydropower, geothermal, fossil fuel, biomass, and solar energy pilot projects."

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon

the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

DOE funds are not authorized for project tasks beyond 1.2.1 (except 1.4.1) pending outcome of the environmental assessment.

This restriction does not preclude you from:

The U of U project proposers are authorized to initiate the preparation of an EA by a third-party contractor, consistent with DOE NEPA implementing regulations. DOE, U of U project proposers and third-party contractor shall enter into a Memorandum of Agreement (MOA) defining the scope of services to be completed by the third-party contractor on behalf of DOE.

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Since this project includes Enhanced Geothermal Systems (EGS) activities, an induced seismicity study must be completed for incorporation into the NEPA analysis.

EF2a prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:


NEPA Compliance Officer

Date:

5/11/10

FIELD OFFICE MANAGER DETERMINATION

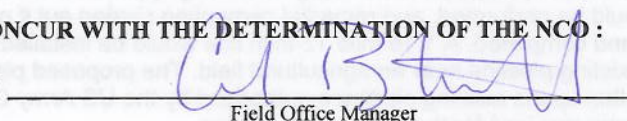
☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- ☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- ☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature:


Field Office Manager

Date:

5-13-10